

CHAPTER 1 INTRODUCTION

1.1 PURPOSE

The purpose of DelDOT's *Standards and Regulations for Subdivision Streets and State Highway Access* is to set forth the requirements of the State of Delaware, Department of Transportation for access to State-maintained roadways and for the planning, design, construction, and acceptance for maintenance of subdivision streets.

Land development and subdivisions have a direct impact on the transportation system. These impacts have to be assessed to ensure that the system is safe and efficient.

The efficiency and safety of a roadway depends to a large extent upon the amount and character of interruption in the movement of traffic. Vehicles entering, leaving, or crossing the roadway, or standing nearby, cause most interruptions in traffic.

Property owners fronting State-maintained roadways have certain rights of access consistent with the zoning and use of their property (except along controlled or limited access highways). In addition, the traveling public who use those State-maintained roadways have certain rights to freedom of movement and safety.

The standards and regulations presented herein are intended to regulate and control the location, design, and operation of access points and transportation facilities maintained by DelDOT. All commercial entrances, residential

entrances and subdivision streets are to be designed and constructed in accordance with these requirements. These requirements apply to the following:

- New subdivisions and land developments,
- Changed or expanded subdivisions and land developments,
- Any new access onto a State-maintained roadway,
- Modifications to an existing access,
- Assessment of the impacts of traffic, and

1.2 LEGAL AUTHORITY

The authority for DelDOT's *Standards and Regulations for Subdivision Streets and State Highway Access* is set forth in the Delaware Code. Applicable sections include:

- Title 17 – Highways, Chapter 1, Section 131.
- Title 17 – Highways, Chapter 1, Section 141.
- Title 17 – Highways, Chapter 1, Section 146.
- Title 17 – Highways, Chapter 5, Section 508.
- Title 21 – Motor Vehicles, Chapter 41.
- Title 29 – State Government, Chapter 61, Section 6103.
- Title 9 – Counties.

Pursuant to Title 17 of the Delaware Code, the State of Delaware Department of Transportation (DelDOT) is charged with the responsibility of controlling all access points to State-maintained

roadways. Relevant portions of this section are as follows:

Title 17 – Highways, Chapter 1, Section 131
– General Jurisdiction

(b) All roads and streets situate in unincorporated suburban communities throughout the State which were built or created between July 1, 1935, and July 1, 1951, whether paved or unpaved, shall henceforth be under the absolute care, management and control of the Department and shall be maintained, repaired and reconstructed by the said Department.

(e) All roads and streets not dedicated to the public use and intended to be private, as indicated on the filing plan, situated in an unincorporated suburban community within the State, shall be constructed in accordance with rules and regulations adopted by the county in which such road or street is located. Such rules and regulations for construction of private subdivision streets and roads shall, in addition to specifying standards for the design and construction of such private streets and roads, establish a mechanism to provide for the perpetual maintenance of such private streets and roads, but in no event shall the State or county be responsible for such maintenance. In addition, the following provisions shall apply to all such streets and roads:

(1) In the event that the county has not adopted rules and regulations for construction of private subdivisions, streets and roads or such rules and regulations have been established and there is no mechanism contained therein to provide for the perpetual maintenance of private subdivision streets or roads, all such roads or streets shall be constructed in accordance with standards set forth by the Department of Transportation, Division of Highways, for streets and roads dedicated to public use.

(2) Private roads or streets shall not be accepted for maintenance by the State until the right-of-way for the streets or roads has been dedicated to the public use, accepted by the State and the streets and roads constructed or

reconstructed at the expense of the property owners in accordance with the standards established by the Department of Transportation, Division of Highways, for streets and roads dedicated to public use in accordance with Chapter 5 of Title 9.

(3) In the event any real property with road frontage or a private road or street, constructed or reconstructed pursuant to this section, which road or street is not to be maintained by the State, is conveyed subsequent to such construction or reconstruction, the deed conveying such real property shall contain a statement that such private street or road is not maintained by the State.

(4) Any private road, street or thoroughfare in the State shall be constructed either in accordance with state standards and pursuant to department rules and regulations or pursuant to rules and regulations established by the county. In either event, a mechanism for perpetual maintenance must be established. The State and county shall have concurrent jurisdiction to enforce the requirements of this section by legal or equitable means. The county shall withhold the issuance of building or occupancy permits for any structure abutting such road, street or thoroughfare to insure compliance with the requirements of this section.

(f) The Department of Transportation, Division of Highways, is hereby authorized to inspect all suburban community street construction and to establish and collect fees for the inspection of said street construction in amounts deemed necessary to defray costs of administering this section. All fees collected shall be placed to the credit of the Department of Transportation, Division of Highways.

(g) All roads and streets situated in unincorporated suburban communities throughout the State which were built between July 1, 1951, and July 1, 1975, whether paved or unpaved, shall, upon dedication of a right-of-way to public use, henceforth be under the absolute care, management and control of the Department of Transportation, Division of Highways, and shall be maintained, repaired and reconstructed by the

said Department of Transportation, Division of Highways. Said right-of-way shall be determined by the Department of Transportation, Division of Highways, in accordance with physical conditions, but in no case shall be less than 30 feet in width. Dedication of the right-of-way must occur prior to June 30, 1978, to qualify for the aforementioned responsibilities under the auspices of this section.

(i) In connection with the Department's review of subdivision proposals affecting the transportation system, it is authorized to collect fees for the costs of administering the subdivision approval process.

Title 17 – Highways, Chapter 1, Section 141 – Regulation of Traffic; Exceptions

(a) The Department shall have jurisdiction and control of all state highways of this State outside of the limits of incorporated cities and towns for the purpose of regulating traffic and for the use and operation of all vehicles thereover, and may adopt any and all rules and regulations respecting the use of such highways and the operation of all vehicles upon the same.

(b) Each rule and regulation adopted pursuant to this section shall be in the form of a resolution signed by the Secretary or the Secretary's designee. A permanent record of these shall be kept by the Department and at the time of adoption a copy of each shall be forwarded to the Department of Safety and Homeland Security and to the New Castle County police, if within their jurisdiction.

(c) Pursuant to this section, the Department is authorized to perform all engineering studies and traffic investigations necessary to implement this section and Chapter 41 of Title 21, and to install, maintain, operate and remove all traffic control devices necessary to implement Chapter 41 of Title 21 and regulations adopted thereunder.

(d) The Department, on the basis of engineering studies and traffic investigations, may prohibit the operation of trucks or other

commercial vehicles or impose limitations as to the weight thereof on designated highways which prohibitions and limitations shall be posted as set forth in § 4505 of Title 21.

(e) Nothing in this section shall be construed as granting the Department the power to make any rules and regulations respecting the use of highways contrary to Delaware law.

Title 17 – Highways, Chapter 1, Section 146 – Access to state-maintained highways

(a) The Department is authorized to adopt standards and regulations for the location, design, construction, reconstruction, maintenance, use and control of vehicular and pedestrian access to and from any state-maintained highway in order to protect public safety, to maintain smooth traffic flow, to maintain highway right-of-way drainage, to regulate drainage from property leading into or carried by the highway drainage system and any other public purpose, as determined by the Department.

(b) No person, firm, corporation or the like shall construct, open, reconstruct, maintain, modify or use any crossing or entrance onto a state-maintained highway, street or road, including any drainage modifications leading into or carried by the highway drainage system, without first having complied with standards and regulations adopted by the Department and having obtained a permit issued by the Department.

(c) Any person, firm, corporation or the like who constructs, opens, reconstructs, maintains, uses or modifies an entrance onto or an exit from a state-maintained highway, street or road without first having complied with standards and regulations adopted by the Department and having obtained a permit from the Department for such entrance or exit shall be punished by a fine of not less than \$100 nor more than \$1,000 for each offense, and a further sum in an amount equal to the amount fined for the initial offense for each and every day such violation exists.

(d) For purposes of this section, whenever the use to which a property is being put is changed

such that there will be a significant alteration in the character, flow or volume of traffic, as determined within the sole discretion of the Department, a new permit shall be required.

(e) The Justice of the Peace Courts shall have jurisdiction over violations of this section.

(f) In addition to whatever legal or equitable remedies are available, the Department may install barricades across or remove any entrance or exit constructed, opened, reconstructed, maintained, modified or used in violation of this section and the standards or regulations adopted pursuant thereto, at the expense of the property owner.

Title 17 – Highways, Chapter 5, Section 508
– Dedication of new roads for state maintenance;
approval required; security.

(a)(1) No person, firm or corporation shall construct, or cause to be constructed any new road or street outside the corporate limits of any city or town and intended to be dedicated by the owner thereof to the public use, including the initial installation of traffic and street name signs, unless such road or street is in conformity with plans and specifications approved by the Department and with this section. At a minimum, the initial installation of street name signs must include the placement of such signs at each intersection of the new street with any other street, capable of being read from each direction on any street at each intersection. The new road or street shall be a continuation of an existing or proposed public road designed to be part of the general highway system of the State. Such construction shall be performed pursuant to a written agreement, signed by the developer as hereinafter defined incorporating but not limited to the plans and specifications approved by the Department, the posted security for completion, the location of any decorative subdivision entrance signs installed by the developer, and whatever other terms the Department, in its sole discretion, determines may be necessary. The owner or person actually engaged in any development or construction of residential or commercial property as determined by the Department which will affect

or require access onto state-maintained highways, streets and roads shall be known as the "developer" for purposes of this section.

(2) Pursuant to the terms of this section and such rules, regulations, standards and/or regulations as may be adopted by virtue thereof, the Department shall accept such roads or streets constructed in compliance herewith into the state maintenance system; provided, however, that with regard to any road or street constructed to serve any dwelling, building or facility, etc., other than single family residences, the Department shall have the sole discretion as to whether such road or street shall be accepted into the state maintenance system.

(b) Before commencement of any construction undertaken pursuant to this section, including the installation of utilities within the dedicated right-of-way, the developer shall first post with the Department a good and sufficient bond, certified check, Letter of Credit or other form of security in a manner and form approved by the Department and in such amount as may be fixed, but not to exceed 10% of the estimated cost of such construction as approved by the Department, which bond, certified check, Letter of Credit or the like, shall be conditioned on the faithful performance and satisfactory completion of the obligations imposed by subsection (a) of this section. In the event the developer, regardless of corporate name, has been adjudged by the Department to be in violation of this section and/or has not maintained a satisfactory record of compliance on repair and construction completion as determined by the Department, then the Department may require a bond, certified check, Letter of Credit or other form of security, consistent herewith in an amount not to exceed 100 percent of the cost of such construction.

(c)(1) The Department shall inspect any new road or street being constructed in accordance with this section as well as any construction including utilities within the road or street right-of-way to insure that the construction is in conformity with standards, plans and specifications approved by the Department. Upon dedication of the right-of-way to the public use and satisfactory completion of the street or road

construction including its connection to an existing state maintained road within the sole judgment, discretion and approval thereof by the Department, the Department shall so notify the developer that the new road or street has been accepted into the state maintenance system and that the dedicated right-of-way has been accepted according to the terms of such acceptance.

(2) A signature from a Department inspector shall be obtained before the Department can accept a road from a developer into the state maintenance system.

(3) The Department shall inform by letter an officer of the maintenance association, if any, in the development in which the road will be dedicated, that the Department has accepted the road from the developer. The Department shall send copies of such letter to the state Senator and state Representative. Such letter shall indicate the acceptance date of the roadway(s) and an explanation of the State's 3-year good faith warranty.

(4) The Department, upon acceptance, shall thereafter assume the sole and absolute care, management and control of the new road or street as a public road or street. Until such time as the Department accepts the new road or street, the developer or the developer's legal successor in interest shall be solely responsible for maintenance thereof.

(5) The Department's standards for newly constructed residential subdivision streets include a decorative sign that includes the name of the subdivision and a logo of the State's famous patriot, Caesar Rodney. These new signs shall be installed at each newly approved subdivision and shall be paid for by the developer or developers of such subdivision. Existing subdivisions may also request the Department to install these new signs in place of other signs previously used by the Department. Such requested replacement signs shall be paid for by the subdivision or from Community Transportation Funds allocated by a legislator requesting such signs. The Department shall replace existing standard signs damaged by

vandalism, accident, or the ravages of time with standard signs under its regular maintenance program, unless the decorative alternative has been requested under the provisions of this subsection.

(d) In order to carry out the purpose of this section, the Department shall make and publish rules, regulations, standards and/or specifications for planning, designing, constructing and maintaining any new road or street.

(e) The bond, certified check, Letter of Credit or other acceptable forms of security, posted with the Department shall be immediately due and owing upon failure of the developer to meet the obligations set forth in the agreement executed pursuant to this section. Upon failure of the developer to comply with the standards, plans and specifications and/or with the terms of the said construction agreement, the Department may:

(1) Withdraw any approval to construct such road or street which it has given pursuant to this section and may thereafter notify the appropriate governmental agency to cease issuance of occupancy permits for dwellings in the construction area;

(2) Proceed to forfeiture of the bond, certified check, Letter of Credit or other form of security;

(3) Move to fine violators pursuant to this section;

(4) Seek specific performance of the developer's agreement;

(5) Within its sole discretion, conditionally accept and satisfactorily complete the road or street and recover damages in the amount of completion costs and incidental expenses from the developer; and/or

(6) Institute whatever other legal or equitable actions necessary to cause the streets to be completed.

1.3 ACCESS APPLICATION AND APPROVAL PROCESS

This section outlines the procedures to be followed by developers and/or property owners in order to obtain approval of a commercial access or a State-maintained subdivision street. Access applications, construction permits and procedures for residential units are outlined in Chapter 7. The estimated review time by DelDOT is based on a complete submission. Incomplete submissions will be returned to the developer for resubmission. This process is illustrated in Figure 1-2.

DelDOT reviews the site plan in accordance with these *Standards and Regulations for Subdivision Streets and State Highway Access*. When the plan meets the requirements of DelDOT, a “No Objection to Recordation” letter shall be issued to the governing land use agency. The initial stage fee as outlined herein shall be paid prior to issuance of the “No Objection” letter.

DelDOT will also review construction plans for subdivision streets and/or entrances in accordance with *Standards and Regulations for Subdivision Streets and State Highway Access*. Construction plans must be signed and sealed by a land surveyor or professional engineer registered in Delaware as outlined in Chapter 4.

The construction stage fee must be paid prior to review of the semi-final construction plan. If the requirements outlined in these *Standards and Regulations for Subdivision Streets and State Highway Access* are not met by the second semi-final plan submission, then a new application and construction stage fee shall be required prior to further reviews. Upon review and final approval of the final construction plan, DelDOT will issue an approval letter.

Any site being considered by DelDOT for access on to a State-maintained roadway shall be evaluated to determine if it will also impact any other DelDOT programs. These programs include, but are not limited to, the Corridor Capacity Preservation Program (CCPP), the

Capital Transportation Program (CTP), the Transportation Enhancement (TE) Program, the Highway Safety Improvement Program (HSIP), and the Pavement Rehabilitation Program. If a plan would have an affect on any of these programs, DelDOT may require additional reviews and additional requirements to be met.

1.3.1 APPLICATION

The application with supporting documents and the appropriate number of plans as outlined in Chapter 6 shall be submitted to the Public Works Engineer of the District in which the construction shall take place for review and approval. The locations and addresses of the District offices are as follows:

Figure 1-1 DelDOT Districts

New Castle County (DelDOT Canal District) 250 Bear-Christiana Road Bear, DE 19701
Kent County (DelDOT Central District) 930 Public Safety Blvd. Dover, DE 19901
Sussex County (DelDOT South District) P.O. Box 490 Georgetown, DE 19947

1.3.1.1 Approval of Application

The approval of the application shall be subject to the following conditions:

1. The application shall be properly and clearly completed as determined by DelDOT. Applications found to be unsatisfactory shall be returned for correction and resubmission.
2. The location, design, and construction of driveways and entrances shall meet the geometric requirements of DelDOT. Necessary provisions for drainage, pavement types and thicknesses, sight distance and other construction details shall conform to the current requirements of DelDOT.

3. When access provisions cannot be provided in accordance with DelDOT's requirements due to limitations particular to the site or where the applicant refuses to comply, the access application for the intended use may be denied.

1.3.2 REVIEW OF THE PLAN

The following documents shall be submitted to the Public Works Engineer of the appropriate District to start the review process for a commercial entrance or proposed subdivision:

- Application for access to a State-maintained roadway.
- Design checklist.
- Site plan.
- Site Street Plan.
- Preliminary entrance plan.
- Initial stage fee (See Appendix C)

DelDOT's site plan and site street plan requirements are outlined in Chapter 3. DelDOT must review and approve the site plan and issue the "No Objection" letter prior to granting entrance approval. Submission of a site plan and issuance of a "No Objection" letter is required independent of the local land use agency's requirements.

The requirements for the entrance plan are outlined in Chapter 4. DelDOT will review and comment on the preliminary entrance plan prior to issuance of a "No Objection" letter to the local land use agency.

Once DelDOT has issued its "No Objection" letter for the site plan, the semi-final entrance plan can be submitted along with the construction stage fee. DelDOT will then distribute the semi-final plan to the support sections (e.g., Traffic Section, Pavement Management Section) for review and comment.

Upon addressing all comments provided by DelDOT in a comment / response letter, the final construction plan can be submitted. When DelDOT notifies the applicant that the final

construction plan meets the requirements outlined in these *Standards and Regulations for Subdivision Streets and State Highway Access*, the applicant shall submit the appropriate number of signed and sealed sets of plans for final approval by DelDOT (see Chapter 4).

1.3.3 APPROVAL OF THE PLAN

Following DelDOT's approval of the construction plan, the applicant shall receive one copy of the approved plan from the Subdivision Engineer. The approved construction plan shall be valid for three months.

1.3.4 CONSTRUCTION

The applicant shall submit construction documents (application, security, plans) for the work as outlined in Chapter 6. After review and approval of the security and the required construction documents, the Public Works Engineer shall issue the Notice to Proceed (NTP). No work shall be undertaken until DelDOT issues a NTP. For commercial sites, a Commercial Entrance Construction Permit (see Appendix E) will be issued in addition to NTP.

Upon completion of the construction to the satisfaction of DelDOT, in accordance with the terms of the Permit, DelDOT shall release the security and issue an entrance permit or begin the acceptance procedure when appropriate.

1.4 REVIEW FEES

Review fees (as applicable) will be assessed for all development proposals as follows stages:

- Traffic Impact Study Review (*pending review and approval of the general assembly*).
- The Initial Stage.
- The Construction Stage.

The following applies to determining and collecting fees to cover the costs of administering

the review of a typical land development proposal. All fees are non-refundable.

1. Traffic Impact Study Review: A Fee of \$5000 is collected when an applicant requests confirmation of the Scope of Work for the study.
2. Initial Stage: Fees are collected at the time of submission of the approved record plan for DelDOT's review. The fees associated with this stage reimburse DelDOT for all plan review activities before final plan approval by the local land use agency. An "Initial Stage Fee Calculation Form" must be submitted with the fee (See Appendix C), which is calculated as follows:
 - Minor residential subdivision: \$100.
 - Major residential subdivision: \$400 plus \$10 per lot.
 - Non-residential development: \$500 plus \$20 per lot or \$500 plus \$20 per 1,000 square feet of gross floor area, whichever is greater.
 - Mixed use development: calculated for each land use separately and added together.
3. Construction Stage: Fees are collected at the time of submission of the construction plans for the Department's review. The fees associated with this review reimburse the Department for the technical review of subdivision street plans and highway access plans. A "Construction Stage Fee Calculation Form" must be submitted with the fee (see Appendix C), which is calculated as follows:
 - Minor residential subdivision: N/A.
 - Major residential subdivision: 125% of the Initial Stage Fee for a major residential subdivision as identified in Item 2.
 - Non-residential development: 150% of the Initial Stage Fee for non-residential development as identified in Item 2.
4. Non-Conforming Submissions: Some plan submissions will not fit into the previously

described categories. Developments such as subdivisions with private streets; mobile home parks; golf courses; and borrow pits fall into this category. Plans for such non-conforming developments shall be considered as one lot non-residential. Therefore, the Initial Stage Fee for these developments will be \$520.

5. National Pollution Discharge Elimination System (NPDES) fees: The applicant is required to pay National Pollution Discharge Elimination System (NPDES) fees when DelDOT reviews a stormwater management facility as part of an offsite improvement project where DelDOT has the review and approval authority for the facility. The fee is \$195 per plan.

All fees shall be submitted to the Subdivision Engineer or designee with the appropriate fee calculation form and plan submission. The Subdivision Engineer shall review for accuracy the fee calculation form with respect to the plan and fee submitted. Once reviewed and approved for accuracy, the reviewer will give the check/money order to the Division's financial management unit. The financial management unit will record the payment, assign an internal control number, and initiate the process to deposit the fee with the DelDOT Office of Finance.

1.4.1 FEE ADMINISTRATION

The Department will not accept a record plan or construction plan submission without a respective fee calculation form and payment. Should any payment received be deemed insufficient, one of the following two options are available at the discretion of the Department:

- Funds will be accepted and deposited in accordance with the Department's Cash Receipts Policy. The Department shall notify the applicant that no action on paperwork submitted will take place until the balance of required fees is received.
- All documents subject to review by the Subdivision Engineer will be returned to the

applicant. Documents can be resubmitted with correct fees at a later date.

Only checks or money orders will be accepted and shall be made payable to the Delaware Department of Transportation.

The Department's Cash Receipt Policy must be followed in order to be in compliance with Title 29 of the Delaware Code, Section 6103 (all receipts in excess of \$100 per day must be deposited daily). The date that applications/fees are received in the Division's financial management unit in the Department's administration building in Dover will be used and recorded for this purpose.

Separate spreadsheets have been developed to track and record fees received by the Division's financial management unit for Initial Stage Fees and Construction Stage Fees. These spreadsheets are utilized to record the payment, verify fees received and perform monthly reconciliation of revenues.

1.5 DEFINITIONS

AASHTO Standards – Policies and Standards published by American Association of State Highway and Transportation Officials.

Acceleration Lane – A speed-change lane, including tapered areas, for the purpose of enabling a vehicle entering a roadway to increase its speed to a rate at which it can more safely merge with through traffic.

Access – Any driveway or other point of access such as a street, road, or highway that connects to the general street system. Where two public roadways intersect, the secondary roadway shall be considered the access.

Access Category – One of five categories described in Chapter 9 of the *Standards and Regulations for Subdivision Streets and State Highway Access* that determines the degree to which access to a state highway is controlled.

Accessway – A connection other than a sidewalk or walkway that provides bicycle and pedestrian passage between streets, between a street and a destination, or connecting to an existing or proposed trail.

Alley – A privately maintained street dedicated for public use which provides secondary access along the rear lot line of adjoining properties. Alleys are intended to accommodate access to parcels and service delivery such as trash collection and utility service.

Applicant – An individual or firm seeking either approval from DelDOT for an access application or from a local government for rezoning, conditional use or subdivision application.

Applicant's Engineer – An engineer licensed in Delaware and retained by the applicant to perform engineering services associated with their expertise.

Approved Local Transportation Circulation Plan – A plan providing proposed locations for future roadways designated as minor collector or higher level, within a particular geographic area, that has been approved by DelDOT and the County or local jurisdiction to which it pertains. For the purposes of these Regulations, an Approved Local Transportation Circulation Plan shall include any roadway or segment that was identified on an approved Site Street Plan of a previously approved development.

Approved Study Area – The study area approved for analysis by DelDOT in the Scope of Work Letter.

Area-Wide Study – A study performed, generally in lieu of an individual TIS, for a designated area to determine the area-wide impacts of proposed developments within the specified study area that encompasses more than one possible development project.

Average Daily Traffic (ADT) – The total volume of traffic during a given time period in whole days greater than one day and less than one

year, divided by the number of days in that time period.

Boulevard Street – A street which typically functions as a collector street which involves a landscaped median of varying width which divides opposing travel lanes by green space.

Bypass Lane – A paved area to permit through traffic to bypass left-turning vehicles stopped on the travel lane.

Commercial Access Street – A street typically within a planned business park that serves as a frontage street to abutting properties and which conducts traffic between commercial access streets and major collector and arterial roadways.

Commercial Entrance – An entrance to serve a non-residential site.

Committed Developments – Developments that are recorded or largely approved by the local jurisdiction but which have not yet been constructed.

Community Constraints – Limitations on development created by community facilities, cultural or historic features, preserved open space or farmland preservation areas.

Community Facilities – Public destinations of significance to a community including but not limited to schools, libraries, parks, senior and recreational centers, as well as other neighborhood facilities such as pools and tot lots.

Connectivity – A measure of how efficiently a transportation network provides access between destinations. It is measured using a Connectivity Ratio.

Connectivity Ratio - The ratio of links (street segments) to nodes (intersections and cul-de-sac heads). It is determined by dividing the number of street segments (street sections between intersections and/or cul-de-sac ends) by the number of intersections and cul-de-sac ends. For purposes of this calculation, proposed street

intersections with existing roads and stub roads for future access to vacant developable lands shall count as 0.5 intersections.

Connector Street – A continuous street or streets entirely in the suburban development subdivision street category beginning and ending on the state numbered road system, and having a high volume of through traffic.

Construction Entrance – A temporary access for the ingress and egress of construction vehicles.

Crossover – An opening in a median on a divided highway provided for crossing and turning traffic.

Cul-de-Sac Street – A subdivision street with a single point of access which terminates at a circular paved turn-around. Also referred to as a “dead-end street”.

Deceleration Lane – A speed change lane for vehicles leaving Category 1 functional classification roadways.

Design Hour Volume (DHV) – A traffic vehicle volume determined for use in the geometric design of highways. It is the 30th highest hour vehicular volume experienced in a one-year period.

Divided Highway – A highway with separated roadways for traffic in opposite directions, such separation being indicated by depressed dividing strips, raised curbing, traffic islands, or other physical separations.

Division of Planning, Development Coordination Section (DelDOT) – The unit charged with the responsibility for reviewing subdivision and site plans, traffic impact studies, and development proposals within DelDOT, or such other unit or unit(s) that may be charged with the responsibility at some future date.

Driveway – An access that is not a public street, road, or highway.

Entering Lane – Traffic lane used exclusively for vehicles entering a roadside establishment.

Exiting Lane – Traffic lane used exclusively for vehicles leaving a roadside establishment.

Frontage – The length along the highway right-of-way of a single property tract or roadside development.

Frontage Road – Means a public street or road auxiliary to and normally alongside of and parallel to a highway, constructed for the purposes of maintaining local road continuity and controlling direct access to the main highway.

Full Movement Roadway – A roadway whose turning movements are not restricted when intersecting with a roadway of higher classification or designation.

Functional Classification – A classification system that defines the purposes and hierarchy of all streets and highways within a network (classification system maps can be found on DelDOT's website).

FWOP (Future Without Project) – In a TIS, denotes the anticipated future traffic condition at a location without the addition of traffic generated by the proposed project.

FWP (Future With Project) – In a TIS, denotes the anticipated future traffic condition at a location after the addition of traffic generated by the proposed project.

Gradient or Grade – The rate or percent change in slope, either ascending or descending from or along the highway.

Gross Floor Area – The sum of the total horizontal areas of every floor of every building on a lot. The measurement of gross floor area shall be computed by applying the following criteria:

- a. The horizontal square footage is measured from the face of all exterior walls.
- b. Enclosed storage, mechanical areas, mezzanines and similar structures shall be included as gross floor area wherever at

least seven feet are provided between the finished floor and the ceiling.

No deduction shall apply for horizontal areas void of actual floor space, for example, elevator shafts and stairwells.

High Density Development – Development that will result in a minimum of 50 employees per acre, or 9 residences per acre.

Higher Level Roads – Streets classified as one of the following: major collectors, minor and major arterials, freeways, and interstates.

Higher Order Streets – All streets which are classified above the street being described.

Industrial Street – A Street in an area for manufacturing or industrial use as defined by the local land use agency's zoning code which is located in an unincorporated community and meets the following requirements:

- a. The aggregate internal street system contains a minimum of 500 linear feet of road surfacing.
- b. The internal street system connects to existing or proposed State-maintained roadways.

Interchange – A facility that grade separates intersecting roadways and provides directional ramps for access movements between the roadways. The structure and the ramps are considered part of the interchange.

Interconnectivity – Physical connections of roadways and sidewalks between two or more independent developments or residential subdivisions.

Intra-connectivity – Physical connections of streets and sidewalks within a single development or residential subdivision.

Lane – The portion of a roadway for the movement of a single line of vehicles which does not include the gutter or shoulder of the roadway.

Level of Service – A term used for indicating whether traffic is moving at ideal, average or poor conditions, measured on a scale from “A” to “F”.

Limited Access Highway – Highways, streets or roadways to which owners or occupants of abutting lands and other persons have no legal right of access to or from the same, except at such points and in such manner as may be determined by the public authority having jurisdiction over such highway, street or roadway.

Limited Movement Roadway – A roadway whose turning movements are restricted, typically to right turn only, when intersecting with a roadway of higher classification or designation.

Linkages – Roadways, sidewalks, accessways and walkways that connect between adjacent development parcels and subdivisions.

Local Land Use Agency – The County or municipality that is responsible for reviewing and approving the applicant’s subdivision.

Local Road – All roadways under DelDOT jurisdiction that are generally referred to by county maintenance route numbers. These roads are not subdivision streets and are not roadways classified under the federal highway system.

Local Roadway Network – Those roadways comprising all roadway classifications designated as major collector or lower level (including minor collector, commercial collector, commercial access street, subdivision street, loop street, boulevard street, cul-de-sac, service road and alley).

Loop Street – A subdivision street with one or two points of access on a collector street or other higher order street.

Lot – A bounded area of land portrayed on a recorded or unrecorded plan, which usually also shows nearby streets and other physical features, as well as other lots and parcels. The lots delimited by plans are a basis of separate legally

established parcels, usually for houses or other buildings. The resulting parcels may contain more than one lot, especially where lots are small. Occasionally lots are delimited to transfer land from one parcel to another. Since parcels and lots are related, the terms are often used interchangeably.

Major Residential Subdivision – A subdivision of six or more residential lots.

Service Road – A subdivision street which is adjacent and generally parallel to a limited access arterial roadway or highway which is intended to provide access to properties which adjoin or that are in close proximity to the limited access arterial roadway or highway.

MUTCD – Manual on Uniform Traffic Control Devices.

Median – The portion of a divided highway separating the traveled ways for traffic in opposing directions.

Median Left-Turn Lane – A speed change lane within the median to accommodate left-turning vehicles.

Minor Residential Subdivision – A subdivision of five or fewer residential lots.

Mixed Use Development – Development that consists of two or more land uses within the same building lot or area.

Multi-modal Access – Ability of pedestrians, bicyclists and transit vehicles to enter, exit or use a transportation facility.

Natural Area or Feature – May include slopes in excess of DelDOT standards for maximum slopes, uplands natural areas, wetlands, or other bodies of water.

Neighborhood Commercial District – Commercial districts that serve to provide goods and services to the surrounding neighborhoods, generally consisting of older buildings with unique architectural style.

Net Dwelling Unit Density – The computation of dwelling unit density that excludes land area dedicated to the public use or for use as open space.

Non-Subdivision Road – Any road under DelDOT jurisdiction that is not a Type I, Type II or Type III Subdivision Street.

Operational Analysis – An evaluation or series of evaluations conducted during the TIS and site entrance reviews that is used to determine the ability of a proposed development project to operate safely and with adequate access. Analyses conducted under the heading of “Operational Analysis” may include Queuing Analysis, Highway Capacity Manual Analyses, and Accident Analyses.

Opposite Parcel - A parcel located across a roadway or street from the frontage of another parcel.

Parcel – A uniquely described piece of land whose boundaries are established by legal instrument such as recorded deed, court order or a recorded plot which is recognized as a separate legal entity for the purposes of transfer of title.

PCPHGPL – Passenger cars per hour of green time per lane

Pedestrian Refuge Areas – Areas protected by curb, landscaping or some other similar device so as to provide shelter for pedestrians traveling across vehicle travel lanes.

Physical Constraint – Limitation on development or access created by topographical features on the development parcel, or adjacent parcels, e.g. spacing of existing adjoining streets, freeways, railroads or other physical structures.

Potentially Developable or Redevelopable Land – Land that is not restricted from development by virtue of factors such as farm land preservation, wetlands or other environmental constraints, parkland, etc.

Public Works Engineer – The DelDOT individual assigned to issue permits and supervise construction.

Record plan (Approved) –

- a. A complete plan which defines property lines, proposed street and other improvements, and easements.
- b. A plan of private streets to be dedicated to public use.

Residential Access – An entrance serving a private single-family residential unit from an abutting State-maintained roadway.

Residential Site – A private single-family residential lot.

Right-Turn Lane – An auxiliary lane, or speed change lane for turning vehicles leaving a State-maintained roadway.

Roadway – The portion of a highway, including the travel-ways and shoulders.

Scope Confirmation Letter – A letter prepared by an applicant’s engineer, for confirmation by DelDOT, that outlines the requirements of a TIS based on the Scoping Meeting for the Application.

Scoping Meeting – A meeting requested by an applicant to discuss the requirements and study area of a Traffic Impact Study.

Section Area – A 1 mile radius area surrounding the proposed development.

Sidewalks – Paved pedestrian pathways installed along arterial, collector, and local roadways, and subdivision street frontage.

Shared-Use Path – For the purposes of this manual, a shared-use path is a generic term used to refer to a right of way provided for non-motorized traffic (typically bicycle and pedestrian traffic). A shared-use path can be constructed of concrete, bituminous concrete, pavers, compacted material, or a combination of such materials. Access-ways, walk-ways and multi-use trails are shared-use paths.

Shoulder Area – The portion of roadway adjacent to the travel-way for accommodating stopped vehicles and providing lateral support to the base and wearing courses.

Site Plan – The plan sheet(s) signed by a licensed engineer or surveyor that depict the existing and proposed condition of a development site to scale and showing all pertinent information required by DelDOT and the local land use authority to receive the necessary planning or zoning board approvals. The site plan is generally recorded as part of the land use approval process.

Site Street Plan (SSP) – A plan document submitted to DelDOT as part of a complete application for development approval of subdivision streets or of access to development parcels that are 5 acres or larger, depicting proposed local street layout and proposed locations for connections to higher order roads.

Sight Distance – The distance visible to the driver of a passenger vehicle measured along the normal travel path of a roadway from one point to another point at a specified height above the roadway.

State-maintained Roadway – The entire width between the right-of-way of a publicly maintained roadway when any part thereof is open to the use of the public for purposes of multi-modal travel or the entire width of every roadway declared to be a public highway by any law of this state. It includes bridges, culverts, sluices, drains, ditches, waterways, embankments, walls, trees, shrubs, fences, etc.

Stopping Sight Distance – The distance required by a driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object on the roadway becomes visible. It includes the distance traveled during driver perception and reaction times and the vehicle braking distance.

Storage Length – Additional lane length added to an auxiliary lane to store the maximum number of vehicles anticipated to accumulate in the lane during a peak volume period. It

prevents stored vehicles from interfering with the function of the deceleration lane or the through travel lanes.

Stub Street – Temporary dead end street for future connectivity with the adjacent property.

Strip Development – See Minor Residential Subdivision

Subdivision Street – A street within a community or industrial park, categorized into three levels as follows:

- a. **Type I** – Subdivision streets with less than 500 ADT.
- b. **Type II** – Subdivision streets with between 501 to 3000 ADT.
- c. **Type III** – Subdivision streets with more than 3000 ADT.

Suburban Community – Any unincorporated community within the state of Delaware:

- Containing at least 5 separate and distinct property owners; provided, that each parcel of land, condominium or other individually owned unit of a multiunit building shall be deemed to have no more than 1 owner for the purposes of this subchapter;
- In the case of individually owned parcels of land whose streets in the aggregate equal a minimum of 500 linear feet of road surface or in the case of condominium or other type of individually owned units of multiunit buildings whose streets in the aggregate equal a minimum of 300 feet of road surface; and
- Which, in the opinion of the county government and DelDOT, is so situated as to form a unit which is reasonably and economically capable of being improved by the laying, repairing or completion of streets, signs, sidewalks and installation of surface drainage and storm sewers.

In addition to the foregoing such unincorporated community within this State must be:

- Located on a highway which is part of the state highway system or will be connected to the state highway system when the projects provided for are complete and which street shall be either maintained by the DelDOT upon completion pursuant to the requirements of Title 17 of the Delaware Code and DelDOT's *Standards and Regulations for Subdivision Streets and State Highway Access*; or
- Built pursuant to county rules and regulations requiring design and building standards and a means or mechanism to provide for the perpetual maintenance of such suburban community streets as provided herein.

Subdivision –

- a. The division or re-division of a lot, or a parcel of land, by any means, including a plan or a description of metes and bounds, into two or more lots, tracts, parcels, or other divisions of land for the purpose of, whether immediate or future, lease, transfer of ownership, or building development.
- b. The division or allocation of land for the opening, widening, or extension of any street or streets, or other public facilities.

Traffic Divider – A median type formation used to separate entering and exiting traffic.

Traffic Generator – An establishment or facility which produces and attracts traffic that did not previously exist and which causes that

traffic to leave and enter the adjacent roadway. Traffic generation shall be expressed in terms of Average Daily Traffic (ADT). Each vehicle using the facility is to be counted twice (in and out).

Traffic Impact Study (TIS) – A study conducted during the development approval process to determine the impacts that traffic generated by the proposed development will have on the surrounding street network and the improvements needed to the transportation system in order to mitigate those impacts.

Traffic Island – A defined area between traffic lanes for control of vehicle movements or for pedestrian refuge.

Transportation Improvement District (TID) – A geographic area defined for the purpose of securing required improvements to transportation facilities in that area.

Travel Demand Management (TDM) – A strategy or a set of strategies proposed by an applicant to mitigate the traffic impacts of a project by reducing the number of single occupied vehicles traveling to the site during the peak hour. TDM strategies can include such things as car and van pools, flex and staggered employee hours, transit or shuttle service.

Walkways – Pathways within commercial development sites that can range in size from a minimum 5 foot width to accommodate pedestrians, to a maximum 12 foot width to accommodate pedestrians and bicyclists.

Figure 1-2 Land Development Process